

Bayway Refinery P.O. Box 222 1400 Park Averne Linden, New Jersey 07036

<u>Certified Mail - RRR</u> 7010 1870 0000 6667 5987

February 28, 2012

US Environmental Protection Agency
Ariel Rios Building
Mail Code 2254A
1200 Pennsylvania Avenue, NW,
Washington, DC 20460
Attn: Robert G. Heiss, Director
International Compliance Assurance Division

<u>2011 Annual Export Report</u> <u>NJD 986 645 984</u>

Dear Mr. Heiss:

As required by Section 3017 of the Resource Conservation and Recovery Act and under Federal regulations 40 CFR Sections 262.56 and 262.87(a), I submit the "Annual Report of Hazardous Waste Exports for 2011" and waste minimization statements for the ConocoPhillips owned and operated Bayway Refinery.

Contact me at (908) 523-5732 if you need additional information.

Sincerely,

Hans Sidler

Waste Compliance Engineer

Pete Hanley

c:

received



First Class Mail First Class Mail

Robert G. Heiss, Director USEPA Int'l Compli. Assur. Div. 1200 Pennsylvania Avenue, NW washington DC 20460

















CERTIFIED MAIL

1.	PRIMARY EXP	ORTER (Con	signor)						
	Name:		Conoc	oPhillip	ps Com	pany /	Bayway Refinery		
	EPA ID No.			NJD 986645984					
	Mailing Add:	ress: P.O. Box 222							
	City:		Linde	n		State:	New Jersey Zip: 07036		
	0-0-America - 19-5								
2.	CONSIGNEE								
	Name:	STA	BLEX Cana	ada, Ind	c.				
	Address	760	Industr.	ial Blvo	d.				
		Bla	inville,	Quebec	Canada	a J7C3	V4		
	EPA ID No.:	NYD	9807564	15					
3.	TRANSPORTER	No. 1:	Name:			Freeho:	ld Cartage Inc.		
			EPA ID	No.:		NJD 05	4126164		
	TRANSPORTER	No. 2.	Nama		,	Twanan	ant Dellaw Timitee		
	TRANSPORTER	NO. 2:	Name:				ort Rollex Limitee		
			EPA ID	No.:	1	NYF. UU	6000053		
	TRANSPORTER	No. 3:	Name:						
			EPA ID	No.:					
				7.17.7 R _					
4.	WASTE INFORM			A22077000000000000000000000000000000000		2000-000-00	100 11 · 100 100 100 100 100 100 100 100		
	Description	of Waste:	-	Spent	Sandb.	last A	orasives		
	12002000 1205 10	landa e			-555023020022				
	EPA Waste	Numbers:			D008				
	DOT Prope	r Shipping					tally Hazardous Substance,		
				Solid,	n.o.s.	, (D008), III, RQ-10 (Lead)		
					22				
	DOT Hazar	d Class:		9	-	DOT ID	Code (UN/NA): UN 3077		
5.	SHIPPING IN	FORMATION							
	Number of	Shipments	during	the Cal	endar	Year:	2		
		ume of thi				-	17.89 tons		
6.	WASTE MINIM	IZATION ST	ATEMENT						
	No	t Required	(See In	structio	ons)				
						T.			
	Su	bmitted wi	th EPA B	ienniai	Repor	τ			
	xA	ttached							
7.	CERTIFICATIO								
		10.77			1500	0.756	examined and am familiar		
with t	the informati	ion submit	ted in th	nis and	all at	ttached	d documents, and that		
							esponsible for obtaining		
							ion is true, accurate, and		
comple	ete. I am av	ware that	there are	e signif	ficant	penalt	ties for submitting false		
inform	mation includ	ding the po	ossibilit	ty of fi	ine and	d impri	isonment.		
Name (of Responsibl	le Officia	l: Hans 9	Sidler ¶	Title:	Waste	e Compliance Engineer		
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	2						1 1-		
Signe	i: //	8			I	Date:	2/28/2012		
(12)	- 1				-				

1.	PRIMARY EXPO	RTER (Cons	gignor)					
	Name:					mpany /	Bayway Refin	ery
	EPA ID No.			8664598		_		
	Mailing Addr	ess:		Box 222	2		N 7 7	1 07026
	City:		Linde	en	_	State:	New Jersey Z	1p: 0/036
2.	CONSIGNEE							
	Name:	STAE	BLEX Can	nada, In	nc.			
	Address		Industr					
		Blai	nville,	Quebec	Canac	da J7C3v	74	
	EPA ID No.:	NYD	9807564	115				
			80			220		- Y/W
3.	TRANSPORTER	No. 1:	Name:				ort Rollex Li	mitee
			EPA ID	No.:		NAE. 006	5000053	<u> </u>
	TRANSPORTER	No. 2:	Name:		Agrana and a			
			EPA ID	No.:	11 <u>0</u> -2011	A121-2		
4.	WASTE INFORM							
	Description	of Waste:		Lead	Acid E	Batterie	es	
	EPA Waste	Numberge			D002	, D008		
	ErA Waste	Numbers.			D002	, 0000		
	DOT Proper Shipping Name: RQ Waste Batteries, Wet, Filled with Acid,							
	1	11 3		PG III		•	•	
	DOT Hazard	d Class:		8		DOT ID	Code (UN/NA)	: <u>UN 2794</u>
5.	SHIPPING INF	ORMATION						
	Number of	Shipments	during	the Ca	lendar	Year:	2	
	Total Volu	ume of this	s Waste	Shippe	d:	_	2.96 tons	
6.	WASTE MINIMI	ZATION STA	TEMENT					
	Not	Required	(See Ir	nstruct	ions)			
	Suk	omitted wit	th EPA I	Biennia	l Repo	rt		
	x At	rtached						
7.	CERTIFICATIO	ON						
I cer	tify under pe	nalty of l	aw that	: I have	e perso	onally e	examined and	am familiar
	the informati							
	on my inquir							
								accurate, and
	ete. I am aw							itting false
infor	mation includ	ling the po	ssibili	ty of	fine ar	nd impr	isonment.	
Name	of Responsibl	e Official	: Hans	Sidler	Title:	: Waste	e Compliance	Engineer
	d: A	- 1					2/28/12	
Signe	d: ///	2 /				Date:	4/28/12	,

1.	PRIMARY EXPORTER				
	Name:	Conc	ocoPhillips	Company / Baywa	ny Refinery
	EPA ID No.		986645984		
	Mailing Address:		Box 222		
	City:	Linc	den	State: New 3	Jersey Zip: 07036
2.	CONSIGNEE				
	Name:		anada, Inc.		
	Address		rial Blvd.		
				nada J7C3V4	-
	EPA ID No.:	NYD 980756	5415		-
3.	TRANSPORTER No. :	1: Name:		Transport Po	ollex Limitee
•	THE TOTAL THE TOTAL		D No.:	NYF 00600005	
				111 00000000	.5
	TRANSPORTER No. 2				
		EPA II	D No.:		
4.	WASTE INFORMATION	1			
	Description of Wa		Mixed Ba	tteries	
	•				
	EPA Waste Numb	ers:	I	0003, D006, D011	, D008
	DOT Proper Ship	pping Name:	Committee of the contract of t		Containing Potassium
			Hydroxide	Solid, PG III,	
	DOW Hanned Cla		0	DOM TO G)	/ T T T T T T T T T T T T T T T T T T T
	DOT Hazard Clas	3S:	8	DOT ID Code	(UN/NA): <u>UN3028</u>
5.	SHIPPING INFORMAT	!ION			
	N 1 C 0 I				2
	Number of Ship				4
	Total Volume o	t this waste	e Snippea:		tons
6.	WASTE MINIMIZATIO	N STATEMENT			
	N-1 - D-				
	Not Requ	uired (See I	.nstructions)	
	Submitte	ed with EPA	Biennial Re	port	
	x Attache	ed			
7.	CERTIFICATION				
					ed and am familiar
	the information su				
based	on my inquiry of	those indiv	iduals imme	diately respons	ible for obtaining
					true, accurate, and
					or submitting false
inform	mation including t	he possibil	ity of fine	and imprisonme	nt.
Name o	of Responsible Off	icial: Hans	Sidler Tit	le: Waste Comp	liance Engineer
				9	Local Control of Contr
Tues:	1: 1/ E	\		Date: 2/	/-
Signed	1: //~ 2			Date: 2/	2811012

1.	PRIMARY EXPORTER	(6) 25 2)						
	Name: EPA ID No.			s Company / Bayway Refine	ry			
	Mailing Address:		986645984 Box 222					
	City:		den	State: New Jersey Zi	p: 07036			
2.	CONSIGNEE			new delacy Li	p. <u>01030</u>			
۷.	Name: STABLEX Canada, Inc.							
	Address 760 Industrial Blvd.							
				Canada J7C3V4				
	EPA ID No.:	NYD 980756						
3.	TRANSPORTER No. 1:	Name:		Transport Polley Lim	itaa			
٥.	INANSPORTER NO. 1.		D No.:	Transport Rollex Lim NYF 006000053	itee			
	MD 1 M CD CD M DD M C			111 000000033				
	TRANSPORTER No. 2:	Value and the second	D No.:					
		LPA I	D NO.: _					
4.	WASTE INFORMATION							
	Description of Was	te:	Cataly	st (Zinc Oxide)				
	EPA Waste Number	s:	7	K171				
	DOT Proper Shipp	oing Name:	Waste En	vironmentally Hazardous S	ubstance.			
				K171), III, RQ-1 (K171)				
	DOT Hazard Class	·	9	DOT ID Code (UN/NA):	<u>UN3077</u>			
5.	SHIPPING INFORMATI	ON						
	Number of Shipme Total Volume of							
	Total volume of	this waste	s snipped:	3.02 tons				
6.	WASTE MINIMIZATION	STATEMENT	?					
	Not Requi	red (See 1	Instructio	ns)				
	Not Required (See Instructions)							
	Submitted with EPA Biennial Report							
	xAttached	l						
7.	CERTIFICATION							
I cer	tify under penalty	of law tha	t I have	personally examined and a	m familiar			
				all attached documents, as				
				mediately responsible for				
				ed information is true, a				
				cant penalties for submi	tting false			
				ne and imprisonment.				
Name	of Responsible Offi	cial: Hans	Sidler T:	tle: Waste Compliance E	ngineer			
	1	٨						
Signe	d: 1 2)	~		Date: 2/28/2	2012			

1.	PRIMARY EXPORTER (
	Name:	ConocoPhillips Company / Bayway Refinery
	EPA ID No.	NJD 986645984
	Mailing Address:	P.O. Box 222
	City:	Linden State: New Jersey Zip: 07036
•	COVICE OF THE	
2.	CONSIGNEE Name:	STABLEX Canada, Inc.
	Address	760 Industrial Blvd.
	-	Blainville, Quebec Canada J7C3V4
		NYD 980756415
3.	TRANSPORTER No. 1:	
		EPA ID No.: NYF 006000053
	TRANSPORTER No. 2:	Name:
		EPA ID No.:
4.	WASTE INFORMATION	
	Description of Was	ste: Spent Sandblast Abrasives
	EPA Waste Number	rs: D008, D007
	DOT Proper Shipp	ping Name: <u>Hazardous Waste</u> , <u>Solid</u> , n.o.s., (<u>Lead</u> , Chromium), III, RQ-10 (<u>Lead</u>)
	DOT Hazard Class	s: 9 DOT ID Code (UN/NA): UN 307
	Bor Mabara Srass	
5.	SHIPPING INFORMATI	ION
	Number of Shipme	ents during the Calendar Year:1
	Total Volume of	this Waste Shipped: 0.49 tons
6.	WASTE MINIMIZATION	N STATEMENT
		uired (See Instructions)
		ed with EPA Biennial Report
	x Attached	
7	CERMITETON	
7.	CERTIFICATION	of law that I have personally examined and am familiar
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		those individuals immediately responsible for obtaining
	[1] - " [1] [1] - " [1] - " [2] - " [2] - " [2] - " [2] - " [2] - " [2] - " [2] - " [2] - " [2] - " [2] - " [2]	eve that the submitted information is true, accurate, an
		nat there are significant penalties for submitting false
		ne possibility of fine and imprisonment.
Name	of Responsible Offi	cial: Hans Sidler Title: Waste Compliance Engineer
	αI	1
Siana	ed: ALS -	Date: 2/28/12

1.	PRIMARY EXPO	RTER (Con:					
	Name:	<u></u>		s Company / Bayway Refinery			
	EPA ID No.		NJD 986645984				
	Mailing Addr	ess:	P.O. Box 222				
	City:		Linden	State: New Jersey Zip: 07036			
2.	CONSIGNEE						
	Name:	Cle	an Harbors Canad	a Inc.			
	Address		1, 4090 Telfer S	 (
		_	unna, Ontario, C				
	EPA ID No.:	MIR	000035204				
3.	TRANSPORTER	No. 1:	Name:	Freehold Cartage Inc.			
			EPA ID No.:	NJD 054126164			
		200	000000	Net 10 20 20 20 20 20 20 20 20 20 20 20 20 20			
	TRANSPORTER	No. 2:	Name:	N/A			
			EPA ID No.: _	N/A			
4.	WASTE INFORM	ATION					
	Description	of Waste:	Processed feder	al listed hazardous clarified			
			slurry oil sediment				
	EPA Waste	Numbers:	K170				
	DOT Prope	r Shippina	Name: Waste Er	vironmentally Hazardous Substances,			
	201 1100			n.o.s., (K170), PG III, RQ-1			
	DOT Hazaro	d Class:	9 0	OT ID Code (UN/NA): UN 3082			
5.	SHIPPING INE	ORMATION					
	Number of	Shipments	during the Cale	endar Year: 14			
			s Waste Shipped:				
	TOTAL VOIC	INC OI CIII	b waste shipped.	273.01 60.10			
6.	WASTE MINIMI	ZATION ST	ATEMENT				
	No	ot Require	d (See Instructi	ons)			
	Sı	ubmitted w	ith EPA Biennial	. Report			
	x	Attached					
7.	CERTIFICATIO	N					
100 (5)		COLUMN TO THE PARTY OF	law that I have	personally examined and am familiar			
	- 1	_		all attached documents, and that			
				mediately responsible for obtaining			
	1976 1976	1.75 P.		ed information is true, accurate, and			
				icant penalties for submitting false			
				ne and imprisonment.			
		**************************************	l: <u>Hans Sidler</u>	Title: Waste Compliance Engineer			
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Ci an	ad: 1/	= /\-		Date: 2/28/2012			

1.	PRIMARY EXPO	RTER (Cons	70				
	Name: EPA ID No.	-	NJD 9866		pany / Bay	way Refinery	
	Mailing Addr		P.O. Box		e i		
	City:	ess:	Linden		State: New	Jersey Zip:	07036
	city.	-	binden		bcace. New	dersey Zip.	07030
2.	CONSIGNEE						
	Name:	STAB	LEX Canada	, Inc.			
	Address	760	Industrial	Blvd.			
				ebec Canad	a J7C3V4		
	EPA ID No.:	NYD	980756415				
_				_		_	
3.	TRANSPORTER	No. 1:	Name:		hold Carta		
			EPA ID No	.:	NJD 054126	164	
	TRANSPORTER	No. 2:	Name:				
			EPA ID No	.:			
4.	WASTE INFORM	ATION					
	Description			API S	eparator S	olids	
			8	00 100 100 100 100 100 100 100 100 100			
	EPA Waste	Numbers:		K0	51		
			-				
	DOT Proper	Shipping	A CONTRACTOR OF THE PROPERTY O	The second secon	The state of the s	n.o.s., (KO5	51), III,
			RQ	2-10 (K051)			
	DOT Hazard	Class:	9	_	DOT ID Cod	e (UN/NA):	UN 3077
5.	SHIPPING INF	ORMATION					
	1 SS 12	552 3	W 100	0.786 0 1		1000	
				Calendar	Year:	42	
	Total Volu	me of this	Waste Shi	pped:	-	785.53 ton	S
6.	WASTE MINIMI	ZATION STA	TEMENT				
	No	t Required	l (See Inst	ructions)			
	Su	bmitted wi	th EPA Bie	ennial Repo	ort		
				er			
	x At	tached					
7.	CERTIFICATION	N					
	tify under pe		aw that T	have person	nally exam	ined and am	familiar
	the informati						
	on my inquir						
	nformation, I						
	ete. I am aw						
infor	mation includ	ing the po	ssibility	of fine and	d imprison	ment.	
Name	of Responsible	e Official	: Hans Sid	ler Title:	Waste Co	mpliance Eng	ineer
	11	N			100	1 1	
Siane	d: / 1 2	1			Date: 2	28/201	2

Waste Minimization Statement for Hazardous Characteristic Contaminated Spent Sandblast Abrasives

The ConocoPhillips Company owned and operated Bayway Refinery is committed to operating the refinery in an environmentally responsible manner. A source reduction program has been implemented and is continuously being improved.

The Bayway Refinery utilizes crude petroleum as feed stock to produce a complete line of fuel products as well as petrochemical feed stocks and specialty products. The facility does not purchase or produce lead or other hazardous characteristic containing products. The Bayway Refinery uses only environmentally friendly, non-lead based coatings on new and repaired equipment.

As part of the operations of the refinery, rust, scale and paint are removed from transfer lines, storage tanks and process equipment by sand blasting with abrasives in order to prepare surfaces for metal inspection, welding or repainting. Employees have been informed of the potential for lead based coatings at the refinery. They are trained to test dry paints and primers prior to removal and to segregate contaminated media from each job site regardless of generated volume.

Old protective coatings slated for removal are tested by analysis and/or lead stick for lead content. Rather than using a dry sandblast technique, lead based paint from transfer lines, storage tanks and process equipment in difficult to access areas is removed by scraping or by high pressure water and wet garnet blasting, whenever feasible.

Paint removal from tanks is accomplished by either pressure washing, or by utilizing the "Versa Blast" vertical blast cleaning system. The system cleans vertical surfaces by using steel split shot and a very small amount of grit as the blast cleaning media. A hoist system, which is mounted on a fixture at the top of the tank being cleaned, raises and lowers the blast module as the module moves along the surface horizontally. The system is capable of providing white metal finishes.

The horizontal speed, vertical speed, shot flow rate, and fixture movement are adjusted by remote control. The abrasive media are contained, circulated, and cleaned within the blast module. A cyclone separator on the ground separates the steel split shot from the media for re-use and deposits the paint and dust into plastic lined 55-gallon drums. The process reduces the volume of generated lead contaminated hazardous abrasives by up to 95%.

The Bayway Refinery has considered several waste management method alternatives. On-site remediation or fixation of the lead constituent contained in the waste is not feasible because of cost and the lack of treatment permits. Treatment of the low BTU waste by incineration does not reduce the lead hazard and would result in impermissible dilution of the lead component in the incinerator ash.

This minimization statement pertains to shipments of Hazardous Characteristic Contaminated Spent Sandblast Abrasives on pages 1 and 5 of the annual report.

Waste Minimization Statement for Spent Lead Acid Batteries

The ConocoPhillips Company owned and operated Bayway Refinery is committed to operating the refinery in an environmentally responsible manner. A source reduction program has been implemented and is continuously being improved.

The Bayway Refinery has approximately 100 substations which distribute electric power to the various process units. Energy for the substation switchgear and control panels is provided by twelve to sixty lead acid batteries per station. These batteries are periodically replaced to ensure a reliable and uninterrupted electric power supply to the refinery.

The Bayway Refinery is taking source reduction action to reduce the volume of generated used lead acid batteries from substations by choosing high-grade replacement batteries that have an estimated useful service life of more than twenty years. The refinery purchases automotive lead acid batteries for its fleet of cars, trucks and heavy equipment, as they are replaced, an equivalent number of spent automotive batteries are returned to the supplier for recycling.

The Bayway Refinery has considered several waste management method alternatives for lead acid batteries from substations. Shipping these batteries for metal reclamation to a lead smelter in Missouri is deemed unacceptable because of potential future environmental liability concerns. State and Federal agencies have determined that many residential properties in the vicinity of the Missouri plant have been contaminated by lead emissions from the smelting operation. The facility has also received many citations and fines.

In the absence of an alternate and readily available lead smelting facility which is protective to human health and the environment, the Bayway Refinery believes that the present method of shipping the batteries to a competent and experienced waste management service provider for treatment and disposal to be an environmentally sound option.

This minimization statement pertains to shipments of Spent Lead Acid Batteries on page 2 of the annual report.

Waste Minimization Statement for Mixed Batteries

The ConocoPhillips Company owned and operated Bayway Refinery is committed to operating the refinery in an environmentally responsible manner. A source reduction program has been implemented and is continuously being improved.

Bayway Refinery employees and contractors use a variety of equipment and tools that are powered by batteries, including alkaline, silver oxide, lithium, nickel/metal hydride and various other types. Spent batteries are collected and placed into satellite accumulation containers.

The Bayway Refinery has considered sorting the batteries by type in order to make them amenable to metal reclamation. Spent batteries come in all shapes and sizes and vary in length from a fraction of an inch to several inches each. Experience has shown that sorting of those batteries by type to render them acceptable for metal reclamation is tedious, time consuming and subject to human error. Sorting and subsequent transportation of the small volume of generated batteries to various facilities is not cost-effective.

The Bayway Refinery believes that the proper treatment and disposal of a limited volume mixed batteries by a competent and experienced waste management service provider is protective to human health and the environment and constitutes currently the most economically practicable waste management option available to us.

This minimization statement pertains to shipments of Mixed Batteries on pages 3 of the annual report.

Waste Minimization Statement for Spent listed Hazardous K171 Catalyst

The ConocoPhillips Company owned and operated Bayway Refinery is committed to operating the refinery in an environmentally responsible manner. A source reduction program has been implemented and is continuously being improved.

The Bayway Refinery utilizes crude petroleum as a feed stock to produce a complete line of fuel products as well as petrochemical feed stocks and specialty products. As part of the operations of the refinery, a sulfur guard bed at the Hydrogen Process Unit was placed into service to remove trace amounts of sulfur contaminants from natural gas feedstock. The sulfur contaminants are removed by contacting the product with a Zinc oxide catalyst (ZnO).

Over time, the sulfur removal efficiency of the ZnO oxide catalyst decreases. The reactor is taken off-line and isolated. The spent catalyst is cooled to ambient temperatures and placed into 55-gallon capacity drums. Representative samples are taken and submitted to a State certified third-party contract laboratory for the analysis of waste classification parameters.

The Bayway Refinery has carefully evaluated a number of other catalysts to effect the removal of trace level sulfur contaminants from natural gas feedstock. The ZnO replacement catalyst was chosen because it is more reactive with sulfur and is capable of higher sulfur loading. Since ZnO catalyst requires less frequent catalyst change-outs, lesser volumes of spent catalyst will be generated. Strict adherence to detailed catalyst deactivation and change-out procedures reduces toxicity.

The Bayway Refinery has considered several waste management method alternatives for the spent ZnO catalyst. Off-site thermal treatment is not cost-effective and provides minimal environmental benefit since the sum of all organic constituents in the spent ZnO catalyst comprises less than 0.05 percent of the total spent catalyst volume. Furthermore, treatment of the spent ZnO catalyst by incineration does not reduce the arsenic hazard and would result in impermissible dilution of the arsenic component in the incinerator ash.

The Bayway Refinery has contacted several domestic metal reclamation facilities. Most of the plants determined that spent ZnO catalyst is not compatible with their metal reclamation process. Facilities that could have processed the catalyst lacked RCRA hazardous waste permits. The Bayway Refinery believes that Stablex, with its considerable expertise in the chemical treatment and fixation of inorganic waste constituents, is currently the best available option for the environmentally sound disposition of deactivated spent ZnO catalyst.

This minimization statement pertains to shipments of Catalyst Desiccant on page 4 of the annual report.

Waste Minimization Statement for Centrifuged Clarified Slurry Oil Sediment Generated by the Upgrading of "High Ash" Slurry Oil Product

The ConocoPhillips Company owned and operated Bayway Refinery is committed to operating the refinery in an environmentally responsible manner. A source reduction program has been implemented and is continuously being improved.

The Bayway Refinery utilizes crude petroleum as feed stock to produce a complete line of fuel products as well as petrochemical feed stocks and specialty products. As part of the various operations at the refinery, clarified slurry oil product is stored in tanks for sale to customers. The product contains up to 0.6% Fluid Catalytic Cracking Catalyst.

The quality of clarified "high ash" slurry oil is upgraded by removing most of the remaining sediment from the product by mechanical means. The oil is heated to 300 degrees Fahrenheit and processed at high gravitational forces through vertical centrifuges. Phases are separated into 90% valuable clean product and 10% sediment laden centrate.

The Bayway Refinery is taking source reduction action to reduce the volume and the toxicity of generated slurry oil sediment cake by choosing experienced, competent and reliable contractors and employing specialized equipment, innovative processing methods, and best available technology. More than 99% clean valuable product is recovered.

The Bayway Refinery currently generates over 6000 tons of K170 listed slurry oil centrate per year. The Bayway Refinery has considered several waste management method alternatives including reuse of the material as an asphalt substitute, the material is currently sent to RCRA permitted cement kilns in the U.S. Mid-West for energy recovery. The waste stream as currently generated consists of 90% heavy fuel oil and 10% organic aluminum silica equilibrium catalyst fines. The fuel oil component heats the cement kiln and the alumina silicate catalyst is a co product used in the manufacture of Portland cement. Occasionally economic down turns and maintenance activities make the reuse option in the United States unavailable and a fraction of the waste material is exported to Canada for disposal. The material is almost completely destroyed during disposal and the small amount of ash left over is sent to landfill. The volume of waste landfilled after destruction exported represents 0.4% of the volume of this material that is otherwise used for energy recovery in the United States. The Bayway Refinery believes the present waste management method to be an environmentally sound method of disposal of material that we can not recycle.

This minimization statement pertains to shipments of Centrifuged Clarified Slurry Oil Sediment on pages 6 of the annual report.

Waste Minimization Statement for Dewatered Waste Water Treatment Plant Sludge

The ConocoPhillips Company owned and operated Bayway Refinery is committed to operating the refinery in an environmentally responsible manner. A source reduction program has been implemented and is continuously being improved.

The Bayway Refinery utilizes crude petroleum as feed stock to produce a complete line of fuel products as well as petrochemical feed stocks and specialty products. During the various operations which occur at the refinery (refining, pumping, storage, transfer, etc.) oily process wastewater is generated and conveyed via a segregated sewer system to the refinery's wastewater treatment plant. Oil and oily emulsions are recovered in API separator channels and pumped to skimmed oil tanks for recovery.

Water separates by gravity. Recovered oil is utilized as raw material feed stock in the refinery's production process. The water phase is discharged to surface waters in compliance with the refinery's existing NPDES permit after treatment by phase separation, neutralization, equalization, activated sludge oxidation, clarification, dissolved air floatation and mixed media filtration. Oily solids settle to the bottom of the separators and are periodically removed by mechanical means.

In addition to K051 API separator sludge, F037 primary sludges are generated from the gravitational separation of oil, water and solids during the storage of process waste waters in storm water units receiving dry weather flow and during storage in other conveyances. K049 listed solids are generated by the treatment of slop oil emulsions from the refinery's process units.

The Bayway Refinery is taking source reduction action to reduce the volume and the toxicity of materials generated by segregating and processing wastes, whenever feasible, upstream before they enter the process sewer system and become a federal listed hazardous waste. A stripper tower upstream of the wastewater treatment plant removes substantial amounts of benzene and other volatile organic constituents. Once-through cooling water and uncontaminated rainwater from the refinery's tank fields are segregated from the process water collection and treatment system.

The material removed from the separator is pumped to plate and frame filter press to remove much of the oil and water content. Removal of the liquids reduces the toxicity and volume of off-site shipments. A significant quantity of clean oil was recovered from the sludge and reintroduced to the refining process.

The Bayway Refinery has considered several waste management method alternatives. Since the dewatered and deoiled media contain a high component of inorganic sand, sediment and grit and have a very low BTU content, the Bayway Refinery believes the present waste management method to be an environmentally and economically sound option.